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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,600

02/22/2005

Wilhelm Stastny

P/4073-3

6068

2352 7590 03/10/2008
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EXAMINER

KERNS, KEVIN P

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

03/10/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/525,600	Applicant(s) STASTNY ET AL.	
	Examiner Kevin P. Kerns	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-22 and 24-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-22 and 24-27 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In this instance, the abstract (see page 3 of the preliminary amendment of February 22, 2005) includes the legal term "said". In addition, "The invention relates to" is a phrase that can be implied. Appropriate corrections are required.

Claim Objections

2. Claim 17 is objected to because of the following informalities: the claim dependency should be amended, as claim 17 is incorrectly dependent on cancelled claim 5. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-3, 6-22, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korbik et al. (US 6,843,958) in view of PL 104515 (see brief summary of the IDS provided by applicants dated August 24, 2007).

As to independent claims 1 and 22, Korbik et al. disclose a metallurgical furnace comprising a casing of the furnace and an outer casing plate; a cooling plate 10 of copper provided inward of the furnace casing plate 15; and a cooling passage with holding pipes 16 thereon which lead outside the furnace casing plate provided with a securing element in the form of a fixed-point securing element 11. As to claim 5, the holding pipe 16 surrounds a cooling pipe section 14. As to claims 20, 21, 25, and 27, the apparatus comprises a movable point securing element 12 above and to the left the fixed-point securing element 11 (abstract; column 1, lines 4-11; column 2, lines 18-67; column 3, lines 1-23 and 39-67; column 4, lines 1-22; and Figures 1-4).

Korbik et al. disclose the claimed invention above, but lack the mentioning of flanges and disk used between the holding pipes and the cooling pipe sections. As to claims 6-15 and 17-19, it is conventional in the art to have connecting pieces and/or flanges provided between the holding pipe and cooling pipe sections. The cooling pipe connects to the cooling pipe holder by the usage of a flange in order to provide a good seal and prevent water leakage.

Korbik et al. disclose the claimed invention above, but lack the mentioning of the cooling plate height/width ratio of <3 . However, it would have been obvious to design a cooling plate with a height/width ratio of <3 , since this would depend on the size and construction of the furnace. The cooling plate should conform to the size and shape of the furnace. Therefore, designing a plate with a height/width ratio of <3 is merely a design choice by one of ordinary skill in the art.

Korbik et al. do not disclose a cooling plate comprising holding pipes thereon, such that the holding pipes lead through the outer casing plate and are provided with securing elements after passing through the furnace casing plate, such that the coolant pipes are led through the furnace casing plate (as set forth in the newly amended portions of independent claims 1 and 22).

However, PL 104515 (see Figures 1-3 and brief summary of the IDS of August 24, 2007) discloses a copper cooling (casing) plate 1 with cast-in ferrules 3 (necessarily fastened by securing elements through fitting apertures 4), through which cooling (holding) pipes 2 pass from the inside of the cooling plate 1 to the outside of the plate,

such that these features are advantageous for providing cooling to all plates to which the cooling (holding) pipes are attached, thus resulting in reduced thermal strain.

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to modify the metallurgical furnace having the copper cooling plate, as disclosed by Korbik et al., by providing the cooling (holding) pipes that lead through the outer casing plate and are provided with securing elements after passing through the furnace casing plate, such that the coolant pipes are led through the furnace casing plate, as taught by PL 104515, in order to provide cooling to all plates to which the cooling (holding) pipes are attached, thus resulting in reduced thermal strain.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over as applied to claim 1 above, and further in view of Stein (US 5,904,893).

Korbik et al. (in view of PL 104515) disclose and/or suggest the claimed invention above, but fail to teach a web and groove on the side of the cooling plate.

However, Stein discloses webs and grooves on the interior of the cooling plate (see Figure 2) for the purpose of cooling the furnace effectively (abstract; column 1, lines 9-14 and 66-67; column 2, lines 1-15; and Figure 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to provide the webs and grooves, as taught by Stein, in view of the combined teachings of Korbik et al. and PL 104515, in order to

promote effective cooling to the furnace (Stein; abstract; column 1, lines 66-67; and column 2, lines 1-11).

Response to Arguments

7. The examiner acknowledges the applicants' amendment provided with the request for continued examination received by the USPTO on January 2, 2008. New objections to the abstract and claim 17 are raised in above sections 1 and 2, respectively. The amendments overcome the prior 35 USC 102(e) and 35 USC 103(a) rejections based solely upon Korbik et al. The applicants have cancelled claims 5 and 23. Claims 1-4, 6-22, and 24-27 are currently under consideration in the application.

8. Applicants' arguments with respect to claims 1-4, 6-22, and 24-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571)272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin P. Kerns
Primary Examiner
Art Unit 1793

/Kevin P. Kerns/
Primary Examiner, Art Unit 1793
February 22, 2008